



Best Practices to Mitigate Telecom Quote-to-Cash Lifecycle Chaos

Overview

One of the most important set of business processes for a service provider (SP) is found in the quote-to-cash lifecycle, referred to in this whitepaper as “Q2C”. The Q2C lifecycle is the set of processes that delivers revenue and cash, the lifeblood of any company. All service providers have at one or more points in time had issues with the processes in this lifecycle. Many companies never resolve these issues which puts a cap on how fast they can grow their businesses or even worse ends up leading to their demise. This whitepaper explores many of the issues that impact the Q2C lifecycle and offers ideas on how these issues can be overcome.

The Q2C Lifecycle

Before we delve into the issues impacting the Q2C lifecycle, the various components of the Q2C lifecycle must be defined. The Q2C lifecycle consists of the following components (also see diagram below):

- 1. Sales Process:** the set of processes to prospect, schedule meetings, pitch services, present pricing, etc. The sales process is not a focus area of this whitepaper.
- 2. Network Services Quote Process:** this is the process required to identify providers that can service customer location(s) and then obtain price quotes for the required network services.
- 3. Customer Pricing / Quote Process:** this is the process of taking the network quote and adding appropriate margin to that cost to create the price to the customer.
- 4. Network Service Provisioning / Activation Process:** this is the process to design / activate network services on the SP's network / activation platforms. Examples of these activities include porting / assigning TNs, activating TNs, features, subscriptions on UC platforms, building circuits into NNIs / hubs, building logical networks (VLANs, etc.) on top of physical networks, etc.
- 5. Billing Order Entry Process:** this is the process to establish the new services in the billing system so that install and monthly charges can be billed to the customer.
- 6. Network Inventory Management Process:** this is the process of adding new services along with key information to inventory that supports lifecycle activities such as expense accrual generation, charge validation, etc.
- 7. Revenue Reconciliation Process:** this is the process of ensuring that service items are billed when they should be, margins are as designed, etc.



Analysis of Common Issues Plaguing the Q2C Lifecycle

This section will provide some analysis on the common issues that cause problems in the Q2C process.

Network Services Quote Process

The Network Service Quote process is one of the most important components of the Q2C lifecycle as the cost quote that is obtained through this process locks in the margin that will be generated from the service sold. This margin is also locked in for the term of the customer and related network services contracts. The following are common issues we see that negatively impact this process:



- **Lack of automation.** This causes lengthy quote intervals that lead to customer abandonment, high human resource costs, errors in the quoting process and lack of valuable quote data that can be leveraged in downstream processes.
- **Use of inexperienced personnel.** Many service providers treat the quoting process as a commodity process and use the least costly resources to fulfill this effort. This typically leads to higher costing service pricing coming out of the quote process. Other significant impacts related to using inexperienced resources include lack of knowledge of service providers that can serve specific locations and the network by which they serve locations prevents pulling cost competitive quotes. Often, providers that are reselling a location are chosen instead of the facility owner, which is always more costly. Having knowledge of the level of competition in a building (i.e. number of facilities-based providers serving a building) provides an indication as to how aggressively price can be negotiated.
- **Lack of business intelligence on telco/access costs.** Deep knowledge of carrier economics as well as access to and analysis of prior quote history needs to be leveraged in securing new quotes. Cost analytics must be developed and leveraged into benchmarks so that new pricing can be secured that supports competitively priced offerings.
- **Lack of a comprehensive quote process.** Accepting the first quote received from providers and not requesting further quotes results in higher costs. We have studied this for many vendors and find that 2nd quotes result in greater than 10% lower pricing. This is for vendors that provide quotes via APIs. This does add time to the process which is why it is important to have automation to get the initial quote quickly so that it can be further negotiated.

Customer Pricing / Quote Process

Like the Network Services Quote process, the Customer Pricing / Quote process also is the primary determinant of making money or not. The following are common issues that hamper this process:



- **Lack of understanding of cost to provide service.** Visibility into the cost of service (COGS) is necessary to develop pricing that will deliver an acceptable margin. Given that costs / pricing can change quickly in telecom, near real time access to detailed cost information is necessary to continually update pricing models as cost and pricing marketplaces evolve.
- **Lack of visibility into actual (observable) margin.** For those that cannot develop a robust pricing model, the ability to empirically observe customer margins is critical to identify situations that may have turned upside down.
- **Lack of a disciplined pricing process erodes margins.** In environments where Sales can dictate pricing as they “know the market and know how to win” you will see lower margin deals.

Billing Order Entry Process

The Billing Order Entry process is the process that establishes the service in the biller. This rather mechanical process is important for obvious reasons. Issues we commonly see disrupting this process are the following:



- **Lack of automation.** This can lead to data errors / omissions resulting from manual data entry or disjointed and manual processes which can lead to revenue leakage and/or delayed billing / cash realization.

Network Service Order Process

The story in the Network Service Order process is typically related to using manual processes including entering orders through a vendor portal or via email. The issues with managing the process this way are as follows:



- **Lack of automation.** This process requires lots of human resources (i.e. cost) to keep up to date on order status. Manual processes do not scale and will be one of the limiting factors to growth. Not having timely order statuses also can result in delays to take action in response to order changes that delay order completion.
- **Lack of data.** Another issue with manual processes is that they don't typically create a repository of data that is required for downstream activities such as invoice validation, inventory management, etc. When email is used for ordering, critical business information is routinely lost when employees leave the company.

Network Inventory Management Process

The Network Inventory Management process is the bedrock of maintaining a cost management capability and a must have to operate a profitable service provider business. This process establishes the basis to evaluate future cost billing for new services and must be set up at time of service installation.

We see the following common issues in this area:



- **Failure to build a solid network inventory.** This results in missing information that is required to validate costs, accrue for costs, cost allocate / GL code charges, support troubles, perform revenue assurance functions, perform future sourcing activities, deliver analytics, etc.
- **Failure to maintain network inventory.** Some companies may build adequate network inventory but then fail to maintain these on a daily basis so after a few months the information is out of date and unreliable to support the functions described in the above bullet. Inventory must be maintained through the use of an ordering process that is tightly coupled to the inventory.

Revenue Reconciliation Process

The Revenue Reconciliation process is the last step in the Q2C lifecycle and closes the loop on the process. Common issues we see in this area include:



- **Lack of an effective revenue assurance capability.** Most providers don't practice this function at all or do so on a periodic, reactive basis. This either non-existent or sporadically practiced process hurts margins as revenue leakage and excessive costs can go undetected for long periods of time.

Solutions to Common Issues in the Q2C Lifecycle

This section of the paper will identify and discuss solutions to the issues described above across the Q2C lifecycle.

Need for Service Orchestration / Process Management Solution

Over the past 10 years or so there have been many SaaS applications appearing in the marketplace that focus on one or more of the components of the Q2C lifecycle. While this trend has been good for service providers as many of the Q2C functional components are now automated, this trend has also created the following issues due to these SaaS platforms not being integrated to one another:

- **Inefficient processes** leveraging "swivel-chairing" to move services along the process
- **Data errors / omissions** resulting from humans manually moving information from one system to another
- **Lack of visibility** as to which step the process is in due to the entire Q2C process being managed in multiple systems

Fortunately, many of these SaaS platforms have integration capabilities (via REST APIs) so the above issues can be mitigated through the integration between a “hub” application and the individual applications used elsewhere in the Q2C process. In addition to integrating the applications an orchestration capability is needed that will control the flow of the process, assess logic conditions and make decisions, etc. Together, integration and orchestration can provide the following benefits:

- Automate “inter-application” flow, eliminating human data entry and data errors, reducing interval times
- Enhance visibility to process flows within each application
- Provide process analytics to identify overall process health and specific issues with various Q2C functional components



Network Services Quote Process

Most of the issues in the Network Service Quote process are caused by running the process manually using email, spreadsheets, etc. There are far too many tasks that require very specific data as well targeted use cases to both automate pieces of the process and generate analytics that guide the required outcome which is obtaining market-edge pricing for services. The following are some recommendations on ways to level up your network services quote process:

- Find a software solution that supports the following:
 - A range of quote options (email, contract, API)
 - Provides location intelligence (i.e. detailed information as to which carriers serve buildings that are being evaluated)
 - Allows users to augment location intelligence with their own data
 - Provides workflow to guide the process and allows access to the underlying quote data to create custom analytics
 - Supports integration and orchestration capabilities
- Upgrade human resources to close any skills gap where necessary or upskill existing quoting personnel so there is a solid understanding of the fundamentals of telecom quoting / cost principles
- Develop cost benchmarking analytics to guide quote generation and selection
 - Past quote data should be indexed by service area (City, MSA, etc.), service media (fiber, coax, copper, etc.), Vendor or Vendor Tier (Tier 1 incumbent, Cable, Resellers, etc.), bandwidth levels, quote term and number of quotes received per vendor per request so past data can be compared to new quote data. Also cost trends should be created so a general understanding of the directionality of rates is known
- Optimize network service quote process to ensure that providers are leveraged for the best pricing given the characteristics of each quote opportunity

Customer Pricing / Quote Process

The Customer Pricing / Quote process must incorporate the following in order to create and sustain margins:

- Customer pricing must be competitive vis a vis other market offerings and at the same time maximize potential margins. As such, market pricing and internal service delivery and operation cost structures must be understood. This information needs to be leveraged into creating pricing models (i.e. standard cost model to add to wholesale pricing) that can be easily and quickly applied during the quoting process.
- The customer pricing process must also be disciplined to avoid scenarios where large price decreases are made during the process to “make the sale” without factoring in impact on margins. The pricing model referred to above should have built in standard price adjustments that can be made quickly and should also have an escalation process designed in so that any deeper price decreases get thoughtful considerations as to impact on margins
 - Look for quote software automation that supports this piece of the process including the protection of margin

Billing Order Entry Process

The Billing Order Entry process will benefit from the following:

- If data entry errors / omissions are causing revenue leakage then additional scrutiny of entered order data should be performed
 - This can be the job of the sales rep to confirm what was sold was entered correctly so the commission is paid correctly
- The orchestration approach referenced above can also reduce / eliminate data entry errors through the automation of entering order information into the billing platform through the use of quote / proposal information and billing system APIs

Network Service Order Process

Similar to the Network Service Quote process the Network Service Order process must be supported by software automation in order to scale effectively. The following are the key items to cover when automating the order process:

- The order process should be an extension of the quote process (as much of the information developed in the quote process is required for the order process) so quotes can be quickly and seamlessly converted to orders
- The software automation must include a bi-directional data flow automatically updating order status as orders progress through milestones
- The software process should have data integration capabilities so that order events / data can be relayed and acted upon from other systems
 - Data is critical to track order SLA performance, internal order processing performance and is also an important data source for invoice validation
- The order process should actively maintain the data (i.e. MACD) in the inventory platform as orders are fulfilled

Network Inventory Management Process

The Network Inventory Management process is the foundation of the cost management process so is one of the more important processes that drives profitability. The following are some of the ways that the Network Inventory Management function can be enhanced so it supports the cost management function:

- Existing inventory data needs to be reviewed, validated and updated to ensure completeness, accuracy and timeliness of data
 - Many data sources will need to be leveraged to create a proper inventory:
 - Invoices
 - Contracts / Service Orders / Tariffs
 - Vendor network configuration documents (CSRs, etc.)
 - Internal network documents / information
- Order processes (i.e. MACD) need to be leveraged to maintain inventory data as orders are processed to keep inventories accurate and up to date
- The inventory is the central component of many key financial and operational processes so inventory data should be leveraged to support the following activities in an automated manner:
 - Key financial activities include:
 - generating cost accruals
 - validating invoice charges
 - optimizing pricing models
 - revenue to cost reconciliation
 - Operational activities supported include capacity management, SLA/trouble management, network optimization, etc.

Revenue Reconciliation Process

Since this step in the process is by definition the last step in the Q2C process it is mostly not processed at all or effectively given the set of issues that have been identified in the overall Q2C process. The following describes how this function can be set up / practiced and also identifies the requirements of doing so.

- This process requires items in the network (cost) inventory to be related to services that are in the billing (revenue) service inventory. This linkage can and should be established within the Q2C process where the output of the quote / order process can be used to create a corresponding billing item that is linked to the cost service items (that are ordered). Once the link is established then the issues related to dislinkage (i.e. revenue leakage from flawed billing process or excessive cost due to faulty disconnect processes) will be avoided

Companies that have not performed this reconciliation process in the past typically have a good opportunity to uncover revenue leakage and excessive cost issues that when fixed drive increased margins. Once fixed, implementation of the above described capabilities will work to prevent these types of issues to persist in the future, thereby preserving value.

Conclusion

This paper has discussed many issues inherent in the typical Q2C process and ways in which a lot of these issues can be avoided or fixed. Levering technology to drive automation and development of key functionality combined with well qualified human resources can result in the following benefits:

- Reduced cycle time / cost achieved by reducing human tasks via automation and implementing event-driven processes (vs. polling methods)
- Increased revenue through lower customer order abandonment, lower revenue leakage, etc.
- Improved sales / margins by sourcing at better cost as well as creating more profitable pricing
- Improved data accuracy, availability through automation of tasks previously performed via human resources

While the benefits described above are significant it will take an intentional “digital transformation” for most companies to achieve these benefits. It is not enough for companies to simply adopt SaaS platforms to automate / support components of the Q2C process. Modern software technology must also be leveraged to orchestrate the flow of data and intent across the multiple systems and sub-processes to create a seamless Q2C process. When done correctly the results can truly be transformational.

About Cloud Age

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